**Lesson 4:** Collection & Erosion  
**Grade Level:** 4th grade

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| **Objective:**    By the end of the lesson, students will be able to describe how the water cycle affects the earth’s surface including water collecting, erosion, and river meandering |
| **Standards:**  **ELA:**   * **C**CSS.ELA-LITERACY.SL.4.1.C: Pose and respond to specific questions to clarify or follow up on information, and make comments that contribute to the discussion and link to the remarks of others. * CCSS.ELA-LITERACY.SL.4.1.D: Review the key ideas expressed and explain their own ideas and understanding in light of the discussion.   **NGSS:**   * **4-ESS2-1**. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation * **SEP**: Planning and carrying out investigations to answer questions or test solutions to problems in 3–5 builds on K–2 experiences and progresses to include investigations that control variables and provide * **DCI:** ESS2.A: Earth Materials and Systems * **CCC**: Patterns can be used as evidence to support an explanation. |
| **Materials/Technology:**   * Smarboard * Water table set up (by teacher) * Water cycle in a bag experiments * Chromebooks * Access to internet at home for class Wikki |
| **Initiation:**  **-**The class will begin by going over the pre-unit questions that the students answered on the online Wiki  **Procedure:**  **-**Students know that this unit will have hands on experiments in the class, and further explanation of concepts using technology at home  -Class will meet on the rug and go over our model picture of the water cycle, naming each stage  -Then, the class will have a quick talk about the collection of water and how that is the officially last stage of the water cycle  -We will transition by then talking about how water (from our water cycle) affects Earth in the form of river making and erosion  -The students will watch a Brainpop on the formation of rivers (about a minute long)  -Then we will move on to talk about erosion; will prompt the students to turn and talk and think about what erosion might be  -Then they will watch a water table experiment video on erosion, river creation, and river meandering (students will have printed out notes to reference during this time) and take some observation notes as they watch the video.  -Then the class will discuss, overall, how water affects earth's surface  -Lab groups will observe their “Water Cycle in a Bag” experiments again and identify the new process that they see occurring (water condenses and drips down the sides—precipitation) for about 15 minutes  -I will be circulating to each group and make sure that students are recording what they see, are having productive conversations about the experiment, and drawing what they see happening  -Once observations and brief group discussions are completed the class will watch a BrainPOP video to round out the first three stages of the water cycle (up to 2:00)  -Next, students will be told about the writing prompt that they are to do individually using their Wikki resources, notes, and Padlet observations  -To wrap up the cycle as a whole, the students will listen to the water cycle song, before revisiting the objective  At Home:  -At home, the students will use the online Wikki to explore the idea of precipitation and learn about the different types of precipitation  -They will add their observation notes to the lesson 3 padelt, watch any videos and slide shows, complete a matching activity, and using the rubric provided, complete their “My Life as a Drop of Water Prompt” |
| **Differentiation:**    **-**A few students may come to the back kidney table, if they need writing and sentence structure support  -Students can also type their notes instead of writing them out |
| **Assessment:**    -The students will be assessed in two forms:  1. I will be informally assessing the students as I walk around the room during their experiments  2. Students will be assessed by completing the online Padlet post, |